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Research Article

Aligning IT investment decisions with overall business strategy from an enterprise program management perspective, focusing on the integration of IT leadership in strategic decision-making processes

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Abstract - IT investments are aligned with business strategies and the analysis and measurement of budget, prioritization and ROI, through the Balanced Scorecard Framework. The research hypothesizes the priorities and execution of investment decisions by moving the business to success and the manner in which IT leaders carry them out through qualitative and quantitative analysis of data. Results focus on the importance of strategic alignment as a way of maximizing returns and allocating resources optimally. The analysis is useful in terms of comprehending the intricacies of IT investment decision-making and offers feasible suggestions as to how to harmonize the technology initiatives with the organizational objectives.

Keywords - ***IT investments, business strategy, budgeting, prioritization, ROI, Balanced Scorecard, strategic alignment, qualitative data, quantitative analysis.***

I. INTRODUCTION

A. Background of Research:

The current competitive business environment has made the ability to align the IT investments with business strategy quite important to the success of organizations in the long term. IT leaders have a significant role of making informed decisions regarding budgeting, prioritization, and ROI to make sure that investments in technology are made to assist in the overall business purpose [1]. The IT, finance, and business leaders can help increase this by collaborating to create a unified approach, which leads to the growth of the organization [2]. Good decisions and strategy in IT investments can make a great contribution to sustainable business performance.

B. Problem Statement:

Most organizations are unable to make their IT investments match a business strategy, and they also tend to experience inefficiencies and growth opportunities. Absence of decision-making systems to prioritize investments in IT will discourage the success of the business in the long term [3].

C. Research Contribution and Objectives

The study seeks to determine the impact of IT leaders in strategic investment decisions regarding budgetary, prioritization and consultation with the key business stakeholders to ensure that IT investments meet overall business objectives. The main objectives of this research are given below:

- To analyze the decision-making models of IT leaders when it comes to budgeting and prioritizing IT investments.
- To determine the cooperation between IT, finance, and business leaders that affects IT investment strategies.
- To determine the effect of coherent IT investments on the business performance and the strategic plan in the long term.

II. LITERATURE REVIEW

1. IT Business Strategy Alignment

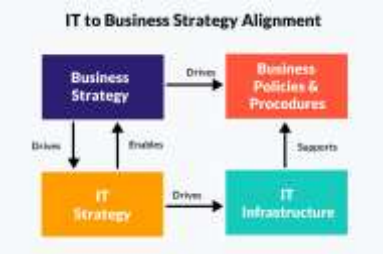

Fig. 1. IT Business Strategy Alignment

The harmony of IT investments and the business strategy has always been identified as a crucial factor towards the success of an organization. It has been shown that where IT projects are aligned to the business objectives, organizations are able to enjoy greater efficiency in their operations, creativity, and improved standing in competition [4]. Strategic alignment of IT and business strategy enables organizations to use technology as a competitive edge and attain strategic goals to a great extent [5].

2. IT Investment Decision Structures

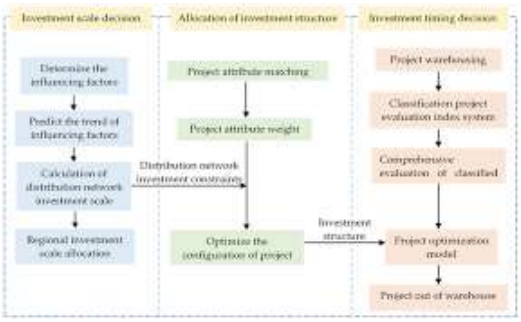

Fig. 2. Flow chart of investment decisions

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The decision-making process of IT investments has various frameworks that have assisted in ranking the projects according to the promise of returns, strategic value, and alignment of business [6]. A widely used method will measure the IT investments by comparing the financial returns but this method may not reflect the strategic pays off of the investments. Decision-makers are inclined to use long-term growth, customer satisfaction, and competitive advantage in calculating the value of IT projects [7]. The frameworks play an important role in informative decision-making with regard to allocating resources.

3. Priorities and Budgeting of IT Rates

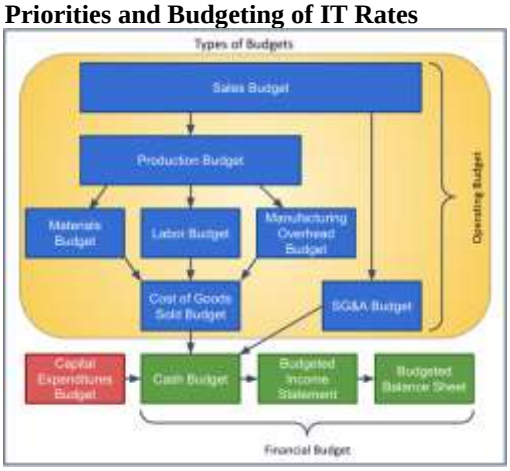

Fig. 3. Operating Budget

The IT investments can only be budgeted effectively by taking both financial and strategic factors into account. Budgets are not to indicate only the short-term expenses but also the long-term advantages of the investment [8]. IT projects have a difficult position in priority because businesses have to adapt both financial capabilities and competitiveness and innovation in the business. The investments are frequently aligned with larger business objectives using strategic frameworks such as the ***Balanced Scorecard*** [9]. This prioritization should be as well dynamic and can be changed according to the current conditions in the market and technological changes.

4. IT, Business Leaders, and Finance Cooperation

The IT, finance, and business leaders should cooperate to make successful IT investment decisions. The leaders of finance are helpful in delivering investments in line with the financial objectives of the organization, whereas the leaders of IT and business present technical and operational views [10]. Good cooperation will result in enhanced interaction and grasp of the business environment that guarantees IT investments are based on strategic priorities. The inclusion of the information of all stakeholders will assist in formulating balanced decisions that will not only look at the financial viability but also the long-term strategic focus of the organization [11].

5. IT Leader Impact on Business Long-term Planning

The IT leaders have a big impact on the long-term business planning by offering insight into the technological trends, risk management and prospects in the future. They are instrumental in leading organizations in the digital rethink so that IT investments can bring about success over time [12]. IT leaders do not just deal with the existing systems, but also consult on new innovations such as cloud computing and artificial intelligence [13]. Their strategic advisory function is useful in shaping the future direction of the organization so that the investment in technology is in line with the growing demands of the business and the market.

6. Effect of Coherent IT Investment on Business

Alignments of IT investments are observed to drive high-business performances through efficient allocation of resources, enhanced customer experiences and innovations [14]. If IT investment is properly aligned with the business objectives, organizations are better placed to develop new products and services that suit the market requirements [15]. It has been mentioned in research studies that the organizations that integrate their IT and business strategies will have a better operational performance which ultimately leads to prolonged profitability and growth. This is important to the organizations wishing to remain competitive and responsive in the dynamic markets.

Literature Gap

Although the need for IT-business alignment is well-documented in existing literature, only a few studies exist on how IT leaders can influence long-term business plans. The alignment frameworks have been studied in most cases, although it is less known how IT leaders work closely with the finance and the business executives to determine IT investment priorities and input in key strategic decisions. More studies should be conducted in order to explore the ways of implementing the same partnerships in real organizational set-ups.

III. METHODOLOGY

A mixed methodology is used to examine how IT leaders fall in line with IT investing choices and business strategies based on budgeting, prioritization processes, and joint practices with finance and business leaders. The research integrates both qualitative and quantitative approaches to give a view of the decision-making process of matching business with IT investments. The methodology has three broad segments, namely: the research design, data collection, and data analysis.

A. Research Design

The study plan is constructed on the mixed paradigm of research that combines qualitative and quantitative data. The qualitative mode implies semi-structured interviews that are semi-structured

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with the leaders of IT, finance, and business in different organizations. Such interviews can assist in investigating the decision-making schemes adopted by the IT leaders, their partnership with other business stakeholders, and their models in the long-term business planning. The focus is to know how these leaders give priority to IT investments and align them with business directions. The interviews are able to illuminate the contexts that were in place to budget and review IT investments which include but are not limited to the return on investment (ROI) and strategic alignment [16]. The quantitative dimension of the study requires secondary data to be gathered by organizations that have managed to strike a balance between IT investment and business strategies.

$$ROI = \frac{Current\ Value\ of\ Investment - Cost\ of\ Investment}{Cost\ of\ Investment} \times 100$$

----- (1)

The ROI, market share, rates of innovation, and operational efficiency is the key performance indicators (KPIs) evaluated at the time of the pre- and post-alignment of IT investments with the business strategy [17]. This quantitative study gives a quantifiable vision of what coherent and consistent IT investments bring to the business performance.

B. Data Collection

Information gathering is done in two phases, such as qualitative and quantitative. Data in the qualitative phase is gathered by using semi-structured interviewing with 10-15 persons, who would occupy important positions in IT, finance, or business strategy in their organization. The sample used to select these participants is purposive, meaning that these will be individuals with pertinent information on the IT investment decision-making. Secondary data is collected in the form of financial reports, records of organizational performance along with other public data in the quantitative phase. The interpretation of KPIs that can evaluate the effectiveness of IT investments is regarded as the main topic of discussion.

C. Data Analysis

The analysis of the data in this study consolidates data analysis based on both qualitative and quantitative approaches to determine the execution of budgeting and ROI analysis of IT investments based on the Balanced Scorecard model. Financial and operational success of every IT investment is measured on quantitative data to determine the budget allocation, ROI and performance measures [18]. The qualitative information obtained during the interviews with IT, finance, and business leaders presents the perspectives on the decision-making process, cooperation, and strategy adherence. This integration permits having a full picture of the IT investments and their influence on the business performance and revealing the area of improvement in terms of budgeting and prioritization and long-term ROI.

D. Ethical considerations

The consent are received by all interview participants and they have been informed about their right to withdraw from the study at any time. All the interview information is stored as confidential information and is anonymized to preserve the identities of the respondents. In the case of the quantitative data, it is planned to utilize only publicly available data, and all financial data is anonymized to demonstrate privacy. The given research is conducted in accordance with ethical standards of data usage and reporting as well.

IV. BUSINESS FRAMEWORK

Fig. 4. Balance Scorecard Framework

The image provides a ***Balanced Scorecard Framework***, which is a strategic management tool that attempts to align IT investments with the general business strategies. This framework has been classified into four most important perspectives, which are Financial, Customer Satisfaction, Internal Processes, and Learning and Growth. All these views are critical towards leading organizations to their long term business goals, as well as helping to underpin and propel these objectives using IT investments.

A. Financial Perspective

The Financial Perspective concentrates on the evaluation of the effectiveness of IT investments in financial returns as well as the cost efficiency. Moreover, it also focuses on cost optimization based on IT spending and the use of technological advances to create new revenue streams [19]. Focusing on financial performance, organizations can make sure that their IT investment can bring immediate profit to their organizations, increasing their profitability and growth, which is quite compatible with business strategies that are rather revenue-oriented and cost-oriented.

B. Customer Satisfaction Perspective

Customer Satisfaction Perspective emphasizes the need to improve user experience and addressing needs of stakeholders, with the help of IT investments. It is interested in enhancing the quality of products and services rendered to customers, in order to ensure that IT innovations will help increase customer satisfaction [20]. The same view also points to the need to improve the

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technological capacity of organizations in order to satisfy the customer as well as internal stakeholders.

C. Perspective of Internal Processes.

The Internal Processes Perspective is designed to streamline the internal operations by investing in IT, which emphasizes improving the operational efficiencies, streamlining the IT infrastructure and optimizing the project management processes. This view is interested in making sure that the internal processes being employed in either the organization to support IT infrastructure are efficient, well-integrated and able to deliver the results in terms of time and budget [21]. Through a lean IT operation and internal process, organizations are able to minimize downtimes, increase productivity, and make IT investments to add to overall performance. This strategy assists companies in remaining competitive and flexible and being able to make adjustments to the changing market needs.

D. Learning and growth perspective

The Learning of thought has stressed that there must be new innovations and the introduction of technology in the organization. Such a viewpoint promotes companies to invest in advances in the technological capacities of their personnel, the promotion of innovation, and adaptation to new technologies. It is also geared towards making sure that the organization is not left lagging behind the technological trends, as this is critical to long term growths and innovation of the organization [22]. Investing in employee training, culture of innovation and keeping up with technological developments, businesses are able to make sure that the IT investments help to tackle continuous learning and development within the organization [23].

The Balanced Scorecard Framework allows making IT investments closely dispersed to the business strategy. It gives a holistic idea of how the use of technology can be exploited to ensure business prosperity at various levels, including financial performance, customer satisfaction and internal efficiency. Combining these lenses, companies can realize the best out of IT investments as these initiatives will help them realize strategically set long-term aims and business objectives.

V. RESULT AND DISCUSSION

A. Results

Table 1: Budgeting Table

IT Investment	Budget Allocation ($K)	Operational Costs ($K)	Expected ROI ($K)	Risk Factor (1-5)	Priority Score (1-10)
IT Investment 1	50	30	120	3	8
IT Investment 2	80	40	110	4	7
IT Investment 3	65	35	150	2	9
IT Investment 4	90	50	100	5	6
IT Investment 5	75	45	140	3	8

The table of budgeting gives a budget plan of five IT investments. Every investment has a budget allocation, a cost of operation and a projected return on investment (ROI). The table also contains a risk factor, between 1 and 5, the degree of risk of each of the projects and a score on priority, between 1 and 10, denoting the extent of strategic importance of the investment. Considering these factors, businesses are able to make an informed decision on the investment in IT by prioritizing costly, risky and anticipated benefits, as the overall objective of the business.

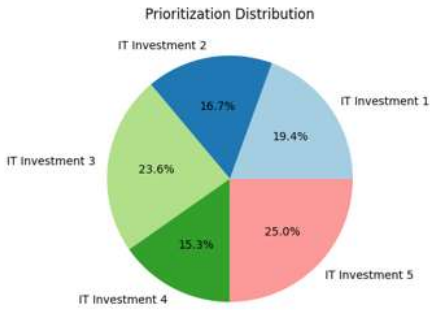

Fig. 5. Prioritization Distribution

The pie chart is used to indicate the prioritization of five investments in IT. Investment 5 is accorded the first priority, which comprises 25 percent of the total prioritization and then 23.6 percent to IT Investment 3. IT Investment 1 is the one with the highest share of 19.4, whereas IT Investment 2 is a 16.7 share, and IT Investment 4 is the least with 15.3 share. These percentages point out the relative values of the various investments in regard to their strategic values.

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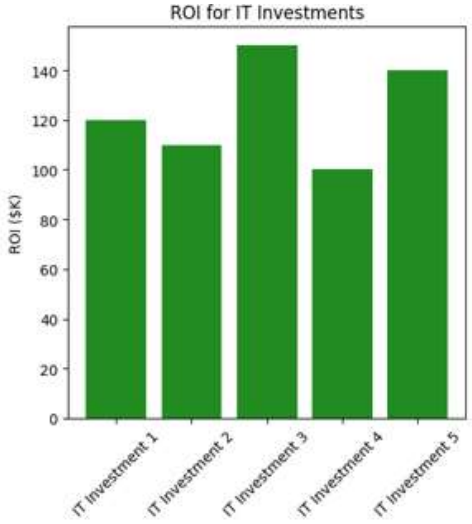

Fig. 6. ROI for IT Investments

The bar chart is used to plot the return on investment (ROI) of five IT investments. The highest ROI and therefore the highest position at the top is IT Investment 3 with ROI at $140K, then comes IT Investment 5 with ROI at $130K. The ROI of IT Investments 1 and 2 is equal and equal to $120K, whereas the ROI of IT Investment 4 is the smallest and equals to $100K.

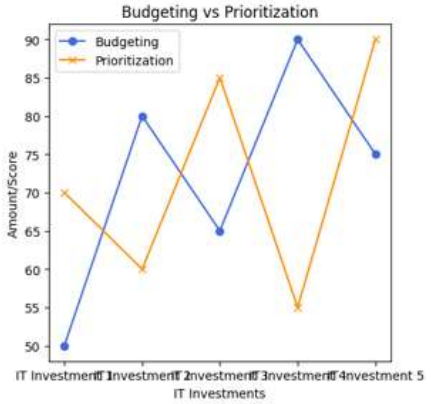

Fig. 7. Budgeting Vs Prioritization

The budgeting amount and prioritization score of five IT investments have been compared in the line graph. IT Investment 3 is allocated the largest budget with its score of approximately 90 and has a slightly lower prioritisation score. IT Investment 5, on the other hand is with the lowest budget allocation, but with the highest prioritization score.

Fig. 8. Balanced Scorecard Fact Sheet

The Balanced Scorecard Fact Sheet exhibits major metrics to gauge how the IT investments have been aligned with the business strategies. It incorporates objectives, KPIs and target and actual results of four perspectives, namely Financing, Customer Satisfaction, Internal Processes and Learning and Growth. There is data on ROI, cost savings, satisfaction scores, and innovation measurements.

B. Discussion

The findings indicate some of the important insights in the budgeting, prioritization and ROI of IT investments. The budgeting table indicates that IT Investment with the largest budget allocation, which is the highest, has the least priority and ROI. The IT Investment 3 with a comparatively low budget has the best ROI, and it is highly regarded. The pie chart of prioritization shows that the priority is allocated to the IT Investment 5 followed by IT Investment 3 which is also in accordance with their strategic significance. IT Investment 3 has the highest ROI in the ROI bar chart and this contributes to its prioritization and cost-effectiveness. It Investment 4 however, has the lowest ROI which puts into focus that there should be an improvement in the cost management. The line graph of budgeting vs. prioritization also reflects the difference in the budgeting and prioritization, whereby IT Investment 5 is highly prioritized but with less financial resource as prioritization and therefore strategic prioritization on their expected returns and company objectives.

C. Challenges

- ➔ Limitations of this research are in the interview process, as the participants can give socially desirable answers, which can restrict the depth of analysis.
- ➔ Organizational performance measures can be not be the best to include the complexity of the decision-making processes in IT investment alignment [26].

VI. FUTURE RESEARCH AND CONCLUSION

The longitudinal effects and the alignment of IT investment on business performance in various industries can be the subject of future studies [27]. Some of the questions that would be important to explore include how market volatility and external economic factors affect the decisions about IT investment and their consequences. Moreover, the studies may explore the IT initiatives that have failed to support the business strategy, offering learning points on the traps to avoid and further providing ideas that can be adopted by organizations to avoid the pitfalls.

The study emphasizes the significance of producing IT investments with a business strategy with the help of methods such as the Balanced Scorecard. The article has also shown that prioritization, budgeting and ROI analysis are the key elements in prioritizing effective use of IT investment. Combining both the qualitative and quantitative data, the study can provide useful information regarding the processes and issues that the organizations encounter during their IT

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decisions. The results emphasize the need to use a holistic approach in making IT investments, which takes into consideration the financial and strategic objectives. The future research will build on these findings, discussing the issues unique to industries and changing business conditions to narrow the range of IT investment practice.

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